

GENERAL PERMIT FACT SHEET FOR CONCENTRATED ANIMAL FEEDING OPERATIONS (CAFO)

Introduction

Confined livestock can generate waste accumulations that are potential sources of pollutants to state surface and ground waters. As potential point-sources pollution, CAFOs are subject to the provisions of the Montana's Water Quality Act. The provisions prohibit pollution of surface and ground water and require permits for discharges containing pollutants. This fact sheet describes the provisions of the law that apply to CAFOs and describes the process for determining which CAFOs require permits.

The Montana Water Quality Act

Discharges of pollutants to state waters are governed by The Montana Water Quality Act (75-5-101 et seq. MCA). Section 605 of the Act identifies prohibited activities. It is unlawful to cause pollution of any state waters or to place wastes in a location where they will cause pollution (75-5-605 (1)(a) MCA). In addition, Section 605 states that it is unlawful to discharge sewage, industrial waste, or other wastes into any state waters without a current permit from the Department of Environmental Quality (75-5-605 (2)(c) MCA).

State waters are defined as a body of water, irrigation system, or drainage system, either surface or underground (75-5-103(25) MCA). Surface waters that flow periodically in ephemeral and intermittent channels are state waters. The definition excludes non-discharging, waste containment or treatment ponds and irrigation systems from which there is no return flow to state waters. The term "state waters" identifies that which is protected under the law. The term conveys no right of ownership of water bodies.

Livestock owners need to ask the key question: "Do waterborne wastes discharge, or have the potential to discharge, from my livestock operation into any state waters?" Without an actual or potential discharge of pollutants there can be no violation or requirement for a permit.

On June 10, 1974, the federal Environmental Protection Agency (EPA) delegated authority to Montana for administration of the Montana Pollutant Discharge Elimination System (MPDES). The MPDES issues permits to control point source discharges of pollution. A CAFO is defined in Section 502 of the Clean Water Act as a point source of pollution. Discharges from CAFOs require a permit.

Not all animal feeding operations (AFO) are concentrated animal feeding operations. A facility that houses animals is considered an AFO when both of the following criteria are met:

Animals are stabled, confined, and fed or maintained for a total of 45 days or more in any 12-month period;

Crops, vegetation forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the facility.

An AFO is a CAFO when:

It contains more than 1,000 animal units;

it contains between 301 and 1,000 animal units and a discharge occurs through a man-made conveyance; or pollutants are discharged directly into state waters which originate outside of the facility and pass over, across, or through the facility;

or it is designated as a CAFO on a case-by-case basis by the Department of Environmental Quality (DEQ).

"Animal unit" means a unit of measurement for any animal feeding operation calculated by adding the following numbers: the number of slaughter and feeder cattle multiplied by 1.0, plus the number of mature dairy cattle multiplied by 1.4, plus the number of swine, weighing 55 pounds or more, multiplied by 0.4, plus the number of sheep multiplied by 0.1, plus the number of horses multiplied by 2.0. (CFR 40, Part 122, Appendix B).

In making a case-by-case designation of a CAFO, the following must be considered:

Size of the operation;

Amount of wastes reaching state waters;

Location of the facility relative to state waters;

Means of conveyance of wastes of state waters;

Slope, vegetation, rainfall, and other physical factors affecting the likelihood or frequency of discharge;

Other relevant factors that may include proximity to public water supplies, quality of the receiving waters, or public concern.

The Permit Program

The CAFO permitting authority is with the Montana DEQ, Water Protection Bureau. The Department has developed a five-year general CAFO permit that contains effluent limits and performance standards. A CAFO operator applies for the general permit by completing Short Form B and paying a \$200.00 application fee. The form requests information on facility ownership, location, size, physical surroundings, and waste control and land application plans. Once authorized to operate under the general CAFO permit, an annual fee of \$250.00 is assessed. The Department must receive application fees prior to application review. Annual fees must be paid after permit authorization.

Effluent Limits and Performance Standards

The conditions of the general CAFO permit hold the permittee to certain discharge limits and standards of performance. A discharge of pollutants to surface waters of the state from a CAFO

may only occur whenever rainfall events, either chronic or catastrophic, cause an overflow from a facility designed, constructed, and operated to contain all process-generated wastewater plus the runoff from a 25-year, 24-hour storm for the location of the CAFO.

A 25-year, 24-hour storm refers to the number of inches of rainfall in a 24-hour period that is expected to occur once every 25 years. The size of the storm is a statistical calculation of the National Weather Service. Discharges from a permitted facility that result from rainfall greater than the 25-year, 24-hour storm are not violations of the permit. Discharges resulting from rainfall that is less than the 25-year, 24-hour storm are violations. Absent a permit, all discharges of process wastewater to state waters are violations of the Montana Water Quality Act. An AFO that discharges runoff only as a result of an amount of precipitation greater than the 25-year, 24-hour storm is not a CAFO and a permit is not required.

A discharge of pollutants to ground waters of the state may only occur when the seepage or leachate volume from a CAFO, combined with the volume of ground water beneath the source, results in ground water pollutant concentrations in compliance with ground water quality standards. Nitrate plus nitrite as nitrogen ($\text{NO}_3 + \text{NO}_2 \square \text{N}$) and fecal coliform bacteria are the principal parameters of concern for ground water quality as affected by CAFOs. The applicable $\text{NO}_3 + \text{NO}_2 \square \text{N}$ standard differs according to the classification of the underlying ground water and the operational history of the CAFO.

Ground water is placed in four classification categories based on its value for specific conductance (SC). Specific conductance is an index of the amount of dissolved solids in the water. The classification categories, associated SC values and applicable $\text{NO}_3 + \text{NO}_2 \square \text{N}$ standards are given in Table 1 (pursuant to ARM 17.30.1006).

Table 1. Ground water classification categories, associated SC values and applicable nitrogen standards.

Category	SC (micro-Siemens/cm)	$\text{NO}_3 + \text{NO}_2 \square \text{N}$ (mg/L)
Class I	≤ 1,000	10
Class II	>1,000; ≤ 2,500	10
Class III	>2,500 ; ≤ 15,000	10 if SC <7,000 50 if SC ≥ 7,000
Class IV	>15,000	50

The $\text{NO}_3 + \text{NO}_2 \square \text{N}$ standards given in Table 1 for Class III and Class IV ground waters do not apply if it can be demonstrated to the satisfaction of the department that the field hydraulic conductivity in the affected aquifer is less than 0.1 feet per day. However all existing and anticipated beneficial uses must be protected in these low-yielding aquifers.

CAFOs that are new or increased sources (discharging on or after April 29, 1993) must meet the nondegradation standard for $\text{NO}_3 + \text{NO}_2 \square \text{N}$. This standard is 7.5 mg/L as opposed to the 10 mg/L value for Class I, Class II ground waters and Class III ground waters having SC values less than 7,000 (micro-Siemens/cm). The standard for new or increased sources discharging to Class III ground waters having SC values greater than or equal to 7,000 micro-Siemens/cm and Class IV is the same as indicated in the table.

The applicable standard for fecal coliform bacteria is a concentration less than one organism per 100 ml

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The general permit also specifies those land areas used for the application of manure or other wastes must provide waste treatment through plant nutrient uptake during the growing season following application. That is, the annual land application rate of solid manure, liquid manure, or other solid or liquid wastes, must not exceed annual crop requirements for nutrients.

All facilities used for the collection, storage, or treatment of manure, bedding materials; silage, feeds, and other substances having a waste contributing potential must be managed to prevent any pollutant from entering state waters.

All wastes from dipping vats, pest and parasite control units, and other facilities utilized for the application of hazardous or toxic chemicals must be handled and disposed of in a manner that prevents any pollutant from such materials from entering state waters.

The general permit requires that all CAFOs having 1,000 animal units or more are required to have on site and implement a Comprehensive Nutrient Management Plan (CNMP) within 365 days (1 year) of the issuance date of the permit. The CNMP must be updated annually to quantify the amount of animal wastes generated by the facility and demonstrate how and where the facility provides treatment for these wastes through land application.

Should you have any questions regarding the CAFO permitting process, contact the DEQ Water Protection Bureau at (406) 444-1454.